

WHAT IS CLAIMED IS:

1 1. A shaft seal mechanism constructed such that a plurality of
2 thin plates are arranged in an annular space between a rotor and a stator
3 so as to form a thin plate assembly of an annular shape, said thin plates
4 have their outer circumferential proximal end side supported to the side of
5 said stator and their inner circumferential distal end side non-fixed to an
6 outer circumferential surface of said rotor so that said thin plate assembly
7 of the annular shape divides said annular space between said rotor and
8 said stator into a higher pressure side area and a lower pressure side area
9 and the outer circumferential proximal end side of each of said thin plates
10 is pinched to be retained between thin plate retaining rings, having a
11 flexibility, of a pair.

1 2. A shaft seal mechanism as claimed in Claim 1, wherein the
2 outer circumferential proximal end side of each of said thin plates is
3 pinched to be retained between said thin plate retaining rings via a
4 deviation preventing member that regulates a motion of each of said thin
5 plates relative to said thin plate retaining rings.

1 3. A shaft seal mechanism as claimed in Claim 1 or 2, wherein
2 said thin plate assembly has its side edge in a rotor axial direction formed
3 with a cut-off portion, there is provided a plate having its side surface
4 formed with a stepped portion that is engageable with said cut-off portion,
5 said plate is arranged, abutting on said thin plate assembly from the rotor
6 axial direction, so that the stepped portion of said plate corresponds to the
7 cut-off portion of said thin plate assembly and said thin plate assembly

8 together with said plate is pinched to be retained between said thin plate
9 retaining rings.

1 4. A shaft seal mechanism constructed such that a plurality of
2 thin plates are arranged in an annular space between a rotor and a stator
3 so as to form a thin plate assembly of an annular shape, said thin plates
4 have their outer circumferential proximal end side supported to the side of
5 said stator and their inner circumferential distal end side non-fixed to an
6 outer circumferential surface of said rotor so that said thin plate assembly
7 of the annular shape divides said annular space between said rotor and
8 said stator into a higher pressure side area and a lower pressure side area
9 and said thin plate assembly is made such that mutually adjacent ones of
10 the outer circumferential proximal end sides of said thin plates, lapped one
11 on another in layers, are welded to be fixed to each other and said thin
12 plate assembly of said thin plates so welded is bent along a circumferential
13 plane of said annular space.